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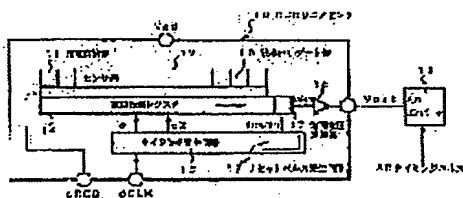
(54) TEMPERATURE DETECTOR, CHARGE TRANSFER DEVICE MOUNTING IT, AND CAMERA

(57) Abstract:

PROBLEM TO BE SOLVED: To realize an on-chip temperature detector so as to precisely detect the temperature of a device to measure by a method wherein the temperature of a device is detected taking advantage of a dark current induced in a charge transfer section.

SOLUTION: In a reset pulse generating circuit 16, reset pulses ϕ_{rs} are generated before signal charge is transferred while signal is steadily outputted, and on the other hand, reset pulses ϕ_{rs} are generated as much thinned out while temperature detection is carried out. Therefore, the dark current charge of charge transfer registers 14 is transferred, collected at a floating, diffusion, and added together, so that a large dark current

can be obtained. The output voltage of a charge voltage converter 17 is led out as a signal voltage while signal charge is transferred, and the output voltage of a charge voltage converter 17 is led out as a temperature detection voltage while no signal charge is transferred. By this setup, an on-chip temperature detector can be realized, so that the temperature of a device to measure can be accurately detected.



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